After mentioning Le Cam, I cannot help but quote from his paper that is reprinted in Adams's book. My prosaic summary of the developments in the proof of the central limit theorem is far more eloquently expressed by him [Le Cam, 1986, p. 78].

> "In the beginning there was de Moivre, Laplace, and many Bernoullis, and they begat limit theorems, and the wise men saw that it was good and they called it by the name of Gauss. Then there were new generations and they said it had experimental vigor but lacked in rigor. Then came Chebyshev, Liapounov, and Markov and they begat a proof and Polyá saw that it was momentous and he said that its name shall be called the Central Limit Theorem.
>
> Then came Lindeberg and he said that it was elementary, for Taylor had expanded that which needed expansion and he said it twice, but Lévy had seen that Fourier transformations are characteristic functions and he said 'let them multiply and bring forth limit theorems and stable laws.' And it was good, stable, and sufficient, but they asked 'Is it necessary'? Lévy answered, 'I shall verily say unto you that it is not necessary, but the time shall come when Gauss will have not parts except that they be in the image of Gauss himself, and then it will be necessary.' It was a prophecy, and then Cramér announced that the time had come, and there was much rejoicing and Lévy said that it must be recorded in the bibles and he did record it, and it came to pass that there were many limit theorems and many were central and they overflowed the chronicles and this was the history of the central limit theorem."

While Le Cam overflows with literary allusion, Fischer overflows with detail, insight and excellent commentary.

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Cauchy's *Cours d'analyse*. An Annotated Translation
By Robert E. Bradley, and C. Edward Sandifer. Sources and Studies in the History of Mathematics and Physical Sciences. Dordrecht (Springer). 2009.

This is the first translation into English of A.-L. Cauchy's seminal *Cours d'Analyse de l' École Royale Polytechnique. Première Partie. Analyse Algébrique*, first published in 1821 and then again in Cauchy's *Oeuvres Complètes* in 1897. As is well known, Cauchy's *Analyse*

Algébrique made a first step towards building rigorous foundations of the infinitesimal calculus, and for this reason it is "one of the most influential mathematics books ever written" as the translators state in the "Translators' Preface" (p. vii).

The revolutionary character of Cauchy's innovation might not be visible when the modern reader looks only at his definitions, which are frequently verbose and even vague. In most cases no quantifiers, no ε's and δ's, and no inequalities appear. Only when Cauchy used his concepts in proofs does it become clear that he had all these ingredients in mind, and more, that he was convinced it was possible to treat the whole of analysis as a rigorous theory.

The present translation follows for plausible reasons the second French edition from 1897 of Cauchy's *Oeuvres Complètes*, which is essentially identical to the first edition with the exception that some mistakes are corrected and the typography and page lay out make a better and clearer appearance. Some mistakes in the second French edition are corrected in this translation. With a few exceptions, which are explained in the Preface, the translation keeps faithful to Cauchy's notation and terminology.

There are two features of the present book that go beyond a mere translation. One is an index of mathematical concepts and topics, the other is annotations to the text. The usefulness of an index need not be explained. The annotations follow the maxim that they are expository rather than interpretative. For a translation this is a wise decision, of course. At places where there are different interpretations the reader is referred to "appropriate entry-point sources" (p. xiv). In most cases, this is a secondary source where the interested reader might find a first introduction into deeper dimensions.

An especially controversial topic of course concerns Cauchy's "incorrect theorems". This is handled in a short, but clear manner. As an example we can consider Cauchy's famous theorem that sum of an infinite series of continuous functions is itself a continuous function. In a footnote the translators say: "This theorem as stated is incorrect. If we impose the additional condition of uniform convergence on the functions s_n, then it does hold. This theorem is controversial. Some have argued that Cauchy really had uniform convergence in mind. See [Lützen, 2003, pp. 168–169] for further discussion." Other passages of a similar nature are annotated in a similar way.

Some annotations correct errors in Cauchy's text, some clarify mathematical details or matters of terminology. Even some additional calculations are given. As a whole, the annotations show that the translators had not only the expert historian in mind, but also a general mathematical reader. Apparently, beginning students of mathematics are also intended as possible readers.

The title of this translation is only "Cauchy's *Cours d'analyse*". This means that the somewhat clumsy appearance of the original French title as quoted above has been polished. The underlying idea might have been that a "modern reader" would neither understand the designation "*École Royale Polytechnique*" nor the term "*Analyse Algébrique*". To the reviewer this is regrettable for two reasons. The original title provides historical information that nicely positions Cauchy's book in its historical context, both institutionally and mathematically. When this appears foreign to a modern reader, it should be an occasion for him to look for further historical information.

Mathematically, the title is simply misleading. Cauchy's book is not a *Cours d'analyse* in its modern sense, but covers only some introductory parts. This becomes clear from the French title, but it is no longer apparent from its polished version.

As the translators say in their Preface their aim was "to make the work available in English" (p. xiii). This is not only useful for a reader with a better command of English than of

French, but also for anybody who intends to write a professional historical paper in English in which he has to quote from Cauchy's book.

This book is useful and well done.

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The History and Development of Nomography
By H.A. Evesham. (Docent Press). 2011 (original copyright 1982). 267 pp., paperback

Nomography is loosely defined as the theory and practice by which the results of geometry are used to facilitate numerical calculation through graphical representations of formulae. It has had a remarkable history. Having its origins in various graphical attempts to ease practical calculations such as the conversion to metric measurements in France in the late 18th century, it grew to a subject in its own right through the work many mathematicians and engineers. Papers began to appear in the 1840s on the effect of deformation on such graphical representations, referred to as nomograms, with the aim of making them more readable. In the following decades material on analytical criteria for representation by graphical means was produced. The first publication [d'Ocagne, 1884] by Maurice d'Ocagne, the man responsible for naming and organizing the discipline, came out in 1884; it described a type of nomogram used to this day. From that year until the early 1930s the subject experienced its greatest progress. This was a period which saw the arrival of three systematic works by d'Ocagne and an expanding literature of both a pure and applied nature. The nomograms themselves found widespread use, first with the expansion of the French railways in the 1840s, and later, among other projects, in irrigation efforts in Egypt in the early 20th century. The theoretical side experienced a lull for several decades following the 1930s but interest was renewed in the late 1950s and early 1960s, when Russian mathematicians in particular paid increasing attention to the mathematics of nomogram construction. The introduction of electronic calculators in the 1970s and more sophisticated electronic computing devices in later years relegated nomography to lesser importance, although nomograms have been in constant use from the early 20th century to the present. In very recent years there has been a resurgence in interest in the subject due in part to the ability to create nomograms using present-day computers. For this aspect one can consult, for example, the beautiful and sometimes fanciful constructions of Doerfler [2006].

The relationship between mathematics and nomography is a fascinating one. In the broadest sense, of course, the subject is mathematical in that geometry is a branch of mathematics as are the analytical relations nomography attempts to render calculable.